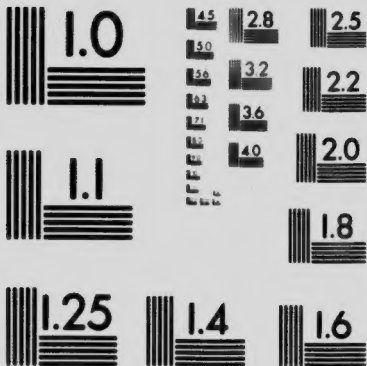
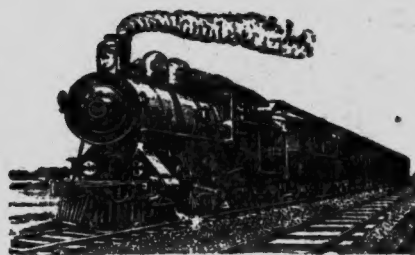




Dominion School Telegraphy and Railroading

TORONTO, ONTARIO



PRACTICAL INSTRUCTIONS AND SPECIAL LECTURES IN

**RAILROAD AND COMMERCIAL TELEGRAPHY
FREIGHT, TICKET, BAGGAGE AND
GENERAL STATION WORK**

SECOND EDITION

Instruction Paper with Test Questions

TELEGRAPHY

PART 3

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HOW TO STUDY.

1. The lessons are divided into parts and numbered, and are only supplied to the student as he progresses with his studies. Study a few pages at a time. Do not skip from one section of the paper to another. If there are any statements you do not understand, ask the instructor, or drop us a card or letter, advising what section and page you are having difficulty with, and we will explain the matter in detail. Review thoroughly, and write out the answers to the test questions at the end of this paper, and send or hand in your work for criticism. Your class letter and number is given you on your certificate of enrollment, and it is important that you put this on your examinations, as well as any letters you write to the schools. Failing to write this on, will cause delay in answering letters or returning examination work. Send one examination at a time. Don't write out the examination questions themselves. Use the number of the questions and write out your answer. In writing the answers, simply head your paper thus:—

Answers to Test Questions. Telegraphy Part 1.

John Smith, G.D. 215,

440 Delaware Ave.,

Toronto, Ont.

Feb. 14/11.

2. We desire to get in close touch with you in your studies, and would ask that you keep us informed regarding your progress and any difficulties you may meet with in your studies.

B12

385.207

D58

p4.3

INTRODUCTION

3. The third stage in learning Telegraphy is the receiving or reading by sound. It is considered more difficult than the sending, although it must be understood that the more practice a student has in sending, the more it disciplines the ear to recognize the sounds more readily when made by the sending operator. In learning to receive, it is necessary for the beginner to have another person send to him or her, or to use an automatic sending device of some kind, for one cannot read by sound from his own writing. It is necessary that the sender should make the signals distinctly and correctly, otherwise, it would be very difficult, if not impossible, for the learner to understand the signals. However, two beginners can get good practice by taking turns at sending and receiving, each correcting the faults of the other. The one receiving should not watch the hand of the sender, or the lever of the sounder. Let your receiving be done by sound from the very start. A person sending, should send slowly and distinctly at first, the one receiving, naming each letter mentally as sent.

4. Assuming that a student had nothing else to do except listen to the characters made on the instruments, he would recognize them quicker than he would if he attempted to write each one down as he heard it, and it is in this particular instance where it shows the value of the elementary training in thoroughly memorizing the code, together with the practice work on the key. The moment you hear a character made, you should know instantly what it represents, but as the least thing will attract your attention, (such as your pencil or paper), it requires considerable practice before you can concentrate your mind and copy what is being sent.

5. The Instructor or Student who is sending should first write letters of the alphabet, figures, etc., in mixed order, sometimes changing to the regular words and sentences. Write slowly and distinctly and allow sufficient time between the characters to enable the students who are copying to detect each character and write it down.

RECEIVING.

6. A letter is determined by the time or times the lever of the sounder strikes the bottom or top stops, and by the duration of time between these clicks. The back, or up, stroke is as necessary in order to read by sound as the forward, or down stroke, and these should be distinguished from each other, for the length of time during which the lever of the sounder remains down could not otherwise be determined.

7. In case the character is not detected by the students who are copying, the sending operator should repeat the character until such time as it is recognized. The more this happens, the more plainly they see their faults in some particular character. It must be remembered that in case the sender makes a mistake in making a character or in the middle of a word, he should make the mark of interrogation and repeat the character or the whole word.

8. The sending operator is supposed always to correct his own mistakes. In practical work, when the receiving operator is not getting what is being sent, he opens his key and repeats the last work received. (Of course, students just commencing, are not expected to do this).

9. In commencing to receive, it is important that the moment you hear a character made, you should write down immediately what you think it is, in order to be ready for the next character that follows, as you will readily see that unless you write down immediately what you think it is, "even though you are wrong," you would not be able to recognize the letter that followed the one you hesitated on.

The great trouble in receiving is that while you hear the letter, you do not have sufficient time to think what it is before another character is made. This simply requires practice to get the mind to act quickly, and you will readily see while all these characters are made by hand, the mind being much quicker, should recognize them, no matter how rapidly they were made. To become a good receiver of rapid sending it is necessary that the receiver be able to copy behind the sender several words; this will be found quite difficult for the beginner, and should not be attempted until you have advanced yourself to such an extent that you can copy about 15 words a minute.

SCHOOL AND HOME STUDY PRACTICE.

10. At this stage you should ever keep in mind the importance of constant practice work on the instruments, keeping strictly to the exercises given in the book, until they can be made in any combination desired.

11. In timing for speed, 5 letters constitutes a word, and the sending and receiving is kept up on letters, figures and words until you can copy 5 words a minute. Keep constantly reviewing the various exercises in Book 2, and practice the various forms of messages, train orders, reporting of trains, etc., that follow in the next instruction papers.

12. A Telegraph operator takes a great deal of pride in good, accurate, rapid sending, and the only way he can accomplish this is by steady, persevering practice, gaining speed slowly. The school nor the instructor can give you this practice, it remains entirely with yourself. When a student can receive and copy at the rate of 25 words a minute, he should try to practice on regular lines in the school, or in some office which will give him the necessary experience. In either case, the instruction, coupled with the practical work and the various forms used in an office, should be taken up.

When 30 words a minute is accomplished, you are capable of taking a regular position as an operator. A student receives his diploma at this stage, provided he understands the rules and has satisfactorily answered all his examination questions.

RECEIVING SIMPLE WORDS.

13. The beginner will notice that the receiving of simple words is quite easy, the reason for this is, that they are used more in every day work than any other, and as a consequence, they are more readily recognized. Here are a few:—

of	the	that	and	was	will	it	at
no	paid	from	for	yes	train	check	

SUGGESTIONS FOR RECEIVING.

14. When a student first starts to receive, have the sender repeat each letter in the alphabet three times, thus: A A A, B B B, etc., and as the symbols of the characters are made and the ear becomes trained, it will be noticed that if these characters are written in mixed order, yet repeated three times, about the time of the second or third repetition, the mind will recognize the character more readily, as it gives you more time to think what the character is before the next one is made. With a little practice in this way, the mind is trained to recognize the character instantly the first time it is made. You will find it a little difficult at first to copy the characters on paper, as your mind is taken up either by your pencil or some interruption; but a little practice will help you to concentrate your thoughts on what is coming, and it should be your aim to write down at once the character, endeavoring to be ready for the next character that follows.

15. If the sending operator is writing letters, allowing the same time between the making of each one, the receiving operator must realize that there is only a certain time in which he must determine the letter, and be prepared to follow the sender. This practice work should be taken up on the alphabet, numbers and the practical punctuation code. Following the above suggestions, words and sentences should next come in order, and the practice work kept up until you can receive at the rate of 5 words a minute.

COMMENCING TO RECEIVE.

16. In the Day and Night School the students are arranged at proper tables by the Instructor, who will assist them and offer any suggestions necessary for their progress.

17. The receiving can best be accomplished by two or three students working together, and while one is making the characters on the key, the other student or students are reading the same by sound, and copying them in their scribbler. The student who is sending should first of all write letters of the alphabet, figures, and punctuations in mixed order, sometimes changing to the regular alphabet order. In the course of a few days, practice sending simple words, then sentences.

18. The receiving operator should write slowly and distinctly, allowing sufficient time between the characters to enable the students who are copying to detect each character and write it down. In case the character is not detected by the students who are copying, the sending operator should repeat the letter until such time as it is recognized. The more this happens, the more plainly they see their faults in some particular character. Keep up this practice work until you are able to copy 5 words a minute.

19. It is good practice for the receiver to listen to the sender writing from a certain page in the instruction book, in order to enable him to recognize the sounds of the various characters without writing them down; then after closing up your book, have the sender repeat the same exercise while you copy it down on your writing pad.

FIVE-WORD SPEED.

20. The proper speed at this stage can best be attained by following this rule: After making a letter, wait two seconds before making another letter, and maintain this interval between all letters in a word. The spacing between words should be about four seconds, and it is advisable to practice sentences out of your instruction papers, particularly ones that may apply to general railroad or commercial work.

21. Exercises should be made up that would include figures and punctuations, and for your guidance, we have listed a number of exercises that will be a benefit to you. By following these exercises, together with other sentences from your instruction paper, you will increase your speed gradually.

EXERCISES CONTAINING WORDS, FIGURES AND PUNCTUATIONS.

23. The air was clear and cold.
It is raining hard here to-day.
What can I do for you?
The weather is extremely cold.
The main line was blocked for miles.
The wires were all down.
The crew tied up for the night.
Engines 308, 721, 4329, were ordered east.
Eng. 419 was turned out.
No. 10 Eng. 305 meet No. 11 Eng. 265 at Galt.
Line clear to top of grade and return for Eng. 165.
The check was incorrect.
It is a railroad message.
Send it collect.
The charges were refused.
C & E No. 4.
The amount was \$1.35.
Add $1/2$, $2/3$, $3/4$ and $11/12$.
No. 1 run twenty (20) mins. late "A" to "G" and fifteen (15) mins. late "G" to "K".
The wording, "Eng. not steaming" is often heard.

Instructors in Day School check here:—

USE OF PUNCTUATION.

24. Punctuation marks are not always sent as they would appear in print or as they should be used, although certain punctuation marks convey as much meaning as an expression on the face, and tone of the voice when two persons are talking. The period is very seldom used, except at the beginning of the body of the message or train order. The comma is perhaps most used, and often used in place of a period, and conveys several meanings, according to where it is placed; take for instance the address of a message, a comma is used at the end of each line and means the same as one would say "drop down a line" to put the street address, or the city or town. Example:—

John Saunders,
24 Concession Street,
Cobourg, Ontario.

USE OF PUNCTUATION—*Continued*

The majority of operators do not transmit the comma as it is illustrated here, but when a punctuation mark is used, the comma is generally sent instead of a period, except that previously mentioned, at the beginning of the body of a message or train order. In transmitting car numbers where the period is shown at the end of a set of figures, the sending operator always uses a comma.

25. The interrogation (?) or question mark as it is often called, is one of the most useful little things in Telegraphy. It is used in a great many different ways. If an operator starts to send a word and makes a mistake, he makes the interrogation mark, then repeats the word just the same as you would correct yourself in speaking by saying "I mean" or "I beg your pardon." It is commonly used in case an operator calls another one and asks some question, which is not recognized at once, and the receiving operator would make the mark of interrogation, which would mean for the sending operator to repeat the question again. The sign of Dollars (\$) is used and counted as one word whenever it appears in any commercial message or cablegram, and is sent just preceding the numerals, example:—SX 14 for \$14. Punctuation marks are not sent after abbreviations or initials. Example:—

Mr. E. L. Insley, N. Y.

26. In the word "to-day's," the hyphen and the apostrophe are never sent. There should be some distinction between the letters of a word and the letters forming the punctuation marks. This distinction is overcome by sending the letters representing the punctuation marks at twice the speed of the others.

USE OF OFFICE CALLS.

27. The telegraph wire is connected into the various offices, and stations so that all the instruments are on the one line or circuit, and when an operator at any office uses the line, all the other offices along the line hear what he is sending.

In order that each office may be distinguished from another, or in order that some method may be employed for one station to work with another, each telegraph office has a call, which consists of one or two letters, (never more) taken from

USE OF OFFICE CALLS—Continued

the name of the place as a rule. Thus the call for London is "DO", Galt "G", Woodstock, "W". An operator when calling an office usually makes the signal three times then signs his own office call, in order that others on the line may know who is using the wire. Provided London was calling Galt, it would be made as follows:— G G G, DO. This procedure would go on until Galt answered the call by simply opening his key and repeating his office call, which in this case is "G". The same method is followed between any other two offices.

If you had business for several stations or several offices, you call one of them and when they do not respond, call one of the others, and keep calling the various offices that you have business for until they answer the call. Of course, you must understand that you are not to keep the circuit for any length of time, and remember, that the Despatcher or Wire Chief has authority to use the wire at any time, no matter if you are right in the middle of a message, as trains must not be delayed from such a source.

If you were interrupted by a Despatcher or Chief Operator, who is usually called a Wire Chief in commercial offices, since it is his position to watch the circuit to locate trouble, etc., you would be justified in resuming your work with the office that you had previously been working with, in preference to any other office sending or receiving. But in resuming your work, you would simply call the office you had been working with and when the operator answered, you would make the figure 4, which means, according to the code, "where shall I go ahead."

TELEGRAPH OFFICE CALLS.

W. R.	A. K.	R. U.	H. A.	K. E.
W. H.	N. Y.	C. N.	S. E.	D. O.
N. O.	R. S.	B. R.	W.	K.
D.	G.	M. S.	G. U.	M. I.
J. C.	C. V.	D. Y.	J. U.	V.

28. The above telegraph office calls apply to most of the stations on the main line of the C. P. R. between Windsor and Toronto. For convenience sake, we will list these in two sets, in order to distinguish "your calls" from those that are listed

TELEGRAPH OFFICE CALLS—Continued

under the heading "Telegraph Office Calls." Your calls will be listed separately, with the idea that you in using the different calls, would do so in the same way as if you were working at the different places from time to time and it was necessary to use such calls. Practice calling each one a number of times, in each case signing your call in proper order. For instance, call W R three times, signing N, then take up the next call and keep signing N until you have called all the offices shown. Go through the same exercise, using your next office call R. This exercise is very important and should not be left until you can call any office desired or could change from one to another in the same way as if you called an office and they did not respond, you would call another office without stopping.

YOUR CALLS.

N.	R.	C.	R. O.	M. R.	C. K.
R. N.	S.	H.	B.	D. I.	F.

This is a very practical exercise, and the practice work should be kept up all through the course.

Instructor in Day School check here:—

OPERATOR'S PERSONAL SIGNAL.

29. In order that each operator may be known and recognized upon the circuit or telegraph lines upon which he is employed, without signing his name in full each time a message is transmitted or received, a personal signal composed of one or two letters usually taken from his name is used. In sending messages, this personal signal is used to distinguish who the operator is, and the personal signal should be written on the message blank, together with the personal signal of the operator who received the message, as well as the time of day it was sent, or received.

30. You will see the advantage of this personal signal when two or more operators are working in the same office, and in case it was necessary to check any particular message, the fault of any omission could be checked to the individual who made the mistake. In sending several messages to the same office, it is customary, when through with the first message to say "WO" meaning who is the operator at the other end, and in response to this question, the other operator will reply by giving his own personal signal. This would be written on the first message and

OPERATOR'S PERSONAL SIGNAL—Continued

on each subsequent message as it is sent, until you finished the business with that office. It is used again, in case you wish to call an office and you wanted to speak to a certain operator whom you knew. When the office answered you, you would say "WO", and if it didn't happen to be the one you wanted, you would simply say "Ask W. to answer." The operator who signed "W" would come to the key and say "I I, W." If the sending operator is not sure that the office responding to his call is the one he wants, he will say "Sine", which means for the responding office to sign the office call.

31. The students must learn the use of these two signals, and not confuse one with the other. At this time they should choose a personal signal, consisting of one or two letters, usually from their name. Be careful, however, not to use letters that are not clear, such as "T" or "I", because T might sound the same as one closing the circuit. It would not be wise either to use two letters like "WO".

TELEGRAPH NUMERAL SIGNALS.

32. The following list of numeral signals are used in practical work, in order to save time, and it is very important that you should memorize these and practice them in both sending and receiving.

* The Canadian Pacific Railway and The G. N. W. Telegraph Co. use this number.

† The G. T. R. use this number.

Note:—The student should learn both numbers.

SIGNAL.	MEANING.
1.	Wait a minute.
2.	Give me correct time.
3.	Where shall I go ahead?
‡5, or (*24)	Have you anything for me?
× 8, or (‡25)	Busy on other wires.
9.	To clear the line for train orders, and for operators to ask for train orders.
10.	Keep your key closed.
11.	Did you receive my last?
12.	How do you understand?

TELEGRAPH NUMERAL SIGNALS - Continued

SIGNAL.	MEANING.
13.	I understand.
18.	What is the trouble.
19.	Train order.
23.	A message for all offices.
73.	Accept my compliments.
31.	Train order.
93.	President's, Vice-President's, General Manager's, General Superintendent's business. (To be used only by his authority.)
94.	Superintendent's business. (To be used only by his authority.)
134.	Who is at the key?

Instructors in Day School check here:—

GENERAL INSTRUCTIONS FOR TELEGRAPH EMPLOYEES.

33. The officials governing the telegraph department of the Railway are rated in authority as follows:—

- 1st: The Superintendent of Telegraph.
- 2nd: The Division Superintendent.
- 3rd: The Trainmaster.
- 4th: The Chief Train Despatcher.
- 5th: The Train Despatcher.

34. **The Superintendent of Telegraph** has charge of the telegraph service and other electrical business of the Company, including construction and maintenance. All telegraphers in the employ of the railway service are directly under his instruction and management. The Superintendent of Telegraph will report to and receive his instructions from the General Superintendent.

35. **Division Superintendent:** For each division of the road, a Division Superintendent is appointed, who has general jurisdiction over all departments of the work being done on his division.

36. **Trainmasters:** The Trainmaster reports and receives his instructions from the Superintendent or Division Superintendent. It is his duty to take charge of the movement of the traffic. He has supervision over the men employed on the trains, to see that

GENERAL INSTRUCTIONS FOR TELEGRAPH EMPLOYEES *Continued*

they understand and observe the rules, and suspend them when necessary for neglect of duty. When trains are delayed by accident or obstruction, he is supposed to go to the place, if necessary, take general charge of the road, and see that proper precautions are taken to insure the safety of trains and property.

37. Each division of the road has a **Chief Train Despatcher**, who is next in authority to the Division Superintendent. The Chief Train Despatcher has charge of the train despatchers employed on his division, the employing of telegraph operators, and sees that all vacancies, owing to sickness or vacation, are promptly filled, and has general charge of all matters pertaining to the telegraph department on his division, such as special orders in regard to the movements of extra and special trains. The Chief Train Despatcher is usually an Agent or an expert telegrapher, who by careful attention, has worked his way to this position. The appointment of all operators must be approved by the Division Superintendent.

38. The Chief Despatchers in the day time will have charge of the work on their respective divisions between the hours of 7 a.m. and 7 p.m. The night Chief Despatchers will have charge of the work on their respective divisions between the hours of 7 p.m. and 7 a.m., but in the absence of either the day or the night chief, the regular Train Despatchers will assume charge.

39. The **Train Despatcher** has charge of the movement of all trains, and is usually a good telegrapher or Agent, whose ability has promoted him to such a position. The more knowledge he has of the road, the lengths of the sidings and the various details of all stations, etc., the better he can perform his work. He soon learns to know which Engineer and Conductor can be depended upon to get their trains over the road when delayed. The Train Despatcher has absolute authority, so far as his division goes, on all subjects and rules governing the time, rights and movements of trains, regardless of the opinion of all other persons. Agents and operators are under his instruction in this regard, subject to the rules.

40. **Station Agents:** The Station Agent reports to and receives his instructions from the Division Superintendent. He

GENERAL INSTRUCTIONS FOR TELEGRAPH EMPLOYEES - *Continued*

must also obey instructions issued by the Superintendent of Telegraph and from the officials of the Passenger, Freight, Accounting and Treasury Department. The Station Agent has charge of the Company's books and papers and of the buildings, sidings and grounds at his station. It is his duty to attend to the sale of Tickets and to the handling of Freight billed inward and outward, together with the collecting of the freight charges on the same. He must see that cars are properly loaded or unloaded and forwarded, keep the accounts and make up his daily and monthly reports, and send in his remittances in the proper manner. The Agent has charge of all the employees at the stations, such as the Operators, Freight Clerks, Ticket Clerks and Baggage-men, and must see that they perform their duties properly. He is expected to advise the Division Superintendent of all matters that may affect the interests of the Company, to advise the Passenger Department of business that might be secured through their assistance. In general, he must work to the interests of the Company.

41. Telegraph Operators: The telegraph operator reports to and receives his instructions from the Division Superintendent, Train Master, Chief Despatcher or Train Despatcher, and is under the authority of the Agent. The operator, in a sense, is the same as an Agent, so far as obeying instructions from the Passenger Department or any officials from other departments of the railway. He is required to be constantly on duty during the hours assigned to him, and must not leave his office for any length of time without permission from the Train Despatcher on duty.

42. The operator must keep a record in the register book of the arrival and departure of all trains, also passing trains, reporting same to Despatcher in the prescribed way. He is expected to be courteous to passengers, and endeavor to make the road he is working on, as well as himself, popular with the public. He is expected to sell the Tickets, and must have his wicket open half an hour before the arrival of passenger trains. He must not receive messages to be transmitted free, unless signed by, or addressed to an officer, agent or employee, in which case, he will send it in the same way that he would send a regular message. His work, as to the handling of trains, railroad and commercial messages, will be taken up in the instructions that are to follow.

RAILROAD BUSINESS.

13. In sending railroad telegrams, there is much less formality than transmitting commercial messages. Instead of spelling out the name of the place that the message is addressed to, the office call is given, unless the business passes to another division or to the line of another Company, in which case, it is transmitted in full. Railroad officials do not wish their employees to take anything for granted. **In case of doubt, always adopt the safe course.**

14. You must obey all the rules that are issued from time to time if you wish to remain in the service. Your office should be kept clean and tidy and your message blanks, train order blanks, etc., should always be ready for immediate use, so that you will not detain the Dispatcher when he calls you for orders, etc.

STANDARD RAILWAY RULES.

15. The standard code of train rules approved by order of the Board of Railway Commissioners for Canada, July 12th, 1909, and adopted by a By-law which was passed by the Railway Board of Directors and approved by his Excellency the Governor General in Council, is used by the Canadian Railways. This code is prepared by the Superintendents and Managing Officials of the numerous railways, and is made very plain, so that there can be no misunderstanding by any of the parties that may be working by its provisions.

In the United States the American Railway Association adopted the standard rules, and 95 per cent. of the railroads use them. Operators may, therefore, work anywhere in Canada, or the United States, and find the system about the same. These new rules went into effect on the C. P. R. June 19th, 1910, on Canadian Northern Jan. 1, 1911, and Grand Trunk about March 1, 1911.

The rules will be explained here in the same order as they appear in the Railway Rule Books that are supplied to every employee upon entering the Telegraph or Train Service. These rules are composed as follows:

1. General notice and general rules stating the duties of employees.

STANDARD RAILWAY RULES - Continued

2. Definitions of terms used in the code.
 3. A system of watch inspection to provide that all the time-pieces shall agree as to the correct time of day.
 4. Explanation of authority by the Time-Table.
 5. Rules for the proper use of the various signals, such as the color, hand, flag, lamp and whistle signals.
 6. The classification of trains and rules for their movement by train orders.
 7. Form of train orders with instructions as to how trains shall proceed.
 8. Train rules for single and double track.
 9. Fixed signals, automatic block signals, interlocking signals.
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16. The prime requisite in railroading is **safety**, which calls for considerable care on the part of every employee. Next to safety comes promptness and exactness of despatch, such as a train leaving on time, and moving at the regular standard speed as provided in the schedule.

17. Telegraph operators are required to pass the regular railroad examination in the rules, showing their fitness to carry out the instructions contained therein. In addition to passing the examination in the rules, operators are required to pass a satisfactory examination in telegraphy, such as the receiving and sending of messages and train orders.

18. The Railway Companies require that each applicant for a position should furnish three letters of reference from responsible people. It is advisable that you arrange to get these letters at this time, in order that you will have them when the opportunity comes for you to take a position.

SPECIAL INSTRUCTIONS TO OPERATORS AND AGENTS.

49. Where Day and Night operators are employed at a station they must not leave the office until relieved by each other, unless excused by the Train Despatcher. The operator going off duty must make out a transfer, informing the operator taking his place about unfinished business, or whether all regular trains due have arrived and left, together with any other information relative to the business that he thought advisable. A book is usually kept for this purpose. Two transfers are shown here-with:—

To M. S. C.

(Initials of night operator coming on duty.)

All trains due have arrived and left, except 54, which should arrive here about 8.30. Extra left Woodstock 5.30 p.m. and will lift four cars merchandise here for east.

J. E. C.

(Initials of day operator going off duty.)

To J. E. C.

(Initials of Day operator coming on duty.)

All trains due have arrived and left. Order board is on for extra West Engine 790. She left Toronto at 6.30. Our Merchandise cars have gone East. One empty box to go West on way freight.

M. S. C.

(Initials of Night operator going off duty.)

NOTE:—In both cases, the operator coming on duty must initial these transfers, and it is the duty of the operator going off duty to see that he does initial the transfer in every case.

50. Operators must not go beyond hearing of their telegraph call, nor leave the office without first notifying the Train Despatcher and obtaining his permission. This does not mean, however, that you would not be allowed to go out on the platform, or to the Freight shed to attend to the regular business, but in such case, however, it would be very unwise for you to leave the office if you knew that the Despatcher was likely to call you for a Train Order, because it must be remembered that trains must get attention before delivering of freight, etc. If

SPECIAL INSTRUCTIONS TO OPERATORS AND AGENTS—*Continued*

people were at the station to get their goods from the freight sheds, you would have to make them wait until you were ready to attend to them. On the other hand, when you are through working with the Despatcher, and the train or trains in question had left your station, it would be advisable for you to report these trains before going to the freight sheds to attend to the delivery of freight.

51. If the Agent were alone at the station, and he knew where it might be possible for him to secure some business for the Company in either the Freight or the Passenger Department, it would be necessary for him to ask permission from the Despatcher before he would be allowed to leave the station. This would not happen very often, however, as it is not necessary for an Agent who is alone at a station to solicit business. If, however, a man came to the station to get particulars about a shipment or about a ticket, it would certainly be to the interest of the Agent to endeavor to secure the business.

52. If the Agent had a day operator and if time permitted, it would be to his interest to solicit business from the various people in the town or city, in fact, it is to the interest of both the Agent and operators to endeavor to secure all the business possible in both the freight and passenger department, as it is only in this way that you can hope to increase the revenue at the station. By thus increasing the revenue, you are demonstrating your ability to your superior officers, and at the same time bringing yourself prominently before them as a capable man, who would be in line for promotion to a more responsible position.

PROPER INTEREST IN COMPANY.

53. It will be the duty of the Agent and operators to take an interest in the company's welfare, to protect their property in the same way as if it were their own. The train order signals should be kept in good working order and ready for use at all times, when necessary, oiling them to make them work freely. Should the signals become disabled and out of order and repairs

PROPER INTEREST IN COMPANY—Continued

needed, wire the Superintendent asking to have them repaired, and stating, if necessary, what material, (if any) is required for repairs. You are expected at all times to offer suggestions and give any information that you think would improve the service. Be ready at all times to aid feeble or old persons on and off trains. Remember, a good word spoken about you by the travelling public will soon reach the ears of the officials, and greatly figure in your chances for promotion.

CONTENTION FOR CIRCUIT.

51. Operators are not permitted to struggle for circuit on the instruments, and an operator who follows this practice is liable to dismissal. This simply means holding your key open, and endeavoring to use the circuit when somebody else is doing the same thing, in which case, neither one of you are making any progress, and one of you should close the key and listen to who is using the circuit, then if it is a case of a person sending a message and you are waiting for train orders, you would immediately open the circuit, make the figure 9, or EX for excuse, then make the figure 9 and call the Despatcher for train orders. In calling the Despatcher, simply call him once and sign your office call. If he does not answer, call him once, each time sending your call. It will be noticed, that the reason for calling just the once, is on account of the Despatcher usually being on the wire all the time, and it would seem out of order to call a man three or four times when he is supposed to be right there, waiting to give instructions.

CLOSING OFFICE AT NIGHT.

55. Where there is no night operator at a station, the agent or operator in closing up for the night must call the Despatcher and say G N for Good Night, and as soon as this is acknowledged by the Despatcher, cut out the telegraph instruments and lock up the office and station. Should the despatcher require you to remain on duty, he will advise you to that effect, in which case, you would get over-time pay.

CLOSING OFFICE AT NIGHT--Continued

56. When carload shipments are ready to go forward during the night, it is necessary to leave the way-bill for the car in the box that is provided for the purpose near the station waiting room door, in order that the conductors may get the way-bills when they lift the car or cars. Of course, it would be necessary for you to wire the Superintendent that you had these cars ready to be lifted. The body of the message might be worded as follows:—"Please arrange to have two cars merchandise lifted for Toronto to-night."

57. Operators and Agents should always leave their name and address posted up inside of the way-bill boxes at stations, so that trainmen, in case of trouble, or some serious detention, could call them to get orders.

58. If the operator is called after regular working hours, he will receive over-time pay.

59. In Commercial Offices where regular hours of duty are in force, the operator in closing up for the night should always cut out the instruments from the switch board.

GENERAL INFORMATION.

60. Operators should require persons leaving commercial messages at their offices for transmission to read them before they are accepted, in order that they will understand the wording. In transmitting difficult words that occur in messages, you should be careful to send them slowly and clearly. This will be more noticeable in words containing spaced characters, such as "practice" or "prices."

61. Telegraph offices must be kept private. Trainmen and employees outside of the station staff or commercial office staff must not be admitted. It is a customary thing, however, for conductors to go into your office to sign orders, unless provisions are made for them to do this over a proper counter. All telegrams and station records must be guarded with the greatest care and held in the strictest privacy. Employees are forbidden to disclose any information in regard to the contents of a telegram or the name of the sender or addressee thereof. This is very important, for **under the law, telegrams are secret and the service must be performed in good faith.**

GENERAL INFORMATION—Continued

62. Rule 102 in the C. P. R. Commercial Tariff Book states that no student will be allowed in any of the offices of the Company without written permission from the Superintendent, nor in case of permission having been given shall any student be permitted to send or receive messages until fully competent to do so.

63. No student is permitted to practice on the main line telegraph wires.

64. The above rule applies to railroads as well, and as students of the school, you will see the advantage of qualifying yourself thoroughly, in order that you can copy off the main line wires that are connected into the stations from the Grand Trunk and Canadian Northern for your personal benefit.

COMMON ABBREVIATIONS.

65. The following table of abbreviations will be found quite common in both Railroad and Commercial Telegraph work. It is important that the student should at this time familiarize himself with these, and learn them so that he will understand what they mean when they are sent on the wire. Some of them are used in regular message work, but the majority of them are used in conversation on the wire. For instance: Pd, the abbreviation for "paid," is used in the check of the commercial message to show the number of words that are paid for. Sig., the abbreviation for "signature," is always used in Railroad and Commercial messages as well as in Train Orders. The abbreviation Ga., for "Go Ahead," illustrates how the receiving operator will advise the sending operator to go ahead at a certain place. To illustrate:—If in copying a message you receive it all, but are not sure about a certain word, you would tell the sender to Ga, at the word that preceded the one you are not sure of, and as soon as you had recognized the word as correct, you would not allow him to go any farther, but you would simply open your key and give your O. K., together with your personal signal.

66. Refer to Instruction Book Part 1, Article 48, Exercise 2, and practice the sending and receiving of the abbreviations shown, as well as the following:—

COMMON ABBREVIATIONS—Continued

A
Word or Phrase Symbol
Avenue.....Ave.
Address.....Add.
Amount.....Amt.

B
Break.....Bk.
Business.....Biz.

C
Correct or All Right..O. K.
Charges.....Chgs.
Copy.....Cy.
Conductor.....Condr.
Complete.....Com.
Circuit.....Ckt.

D
Delivered.....Deld.
Division.....Divn.
Dispatcher.....Despr.

E
Engineer.....Engr.
Express.....Exp.
Engine.....Eng.
Excursion.....Excn.
Extra.....Exa.

G
General Baggage Agt.G. B. A.
 " Freight " G. F. A.
 " Passenger " G. P. A.
Go Ahead.....G. A.
Guaranteed.....Gtd.

H
Have.....Hv.
Here or Hear.....Hr.
How.....Hw.

I
Important.....Impt.
Immediately.....Immy.
Invoice.....Inv.
Instrument.....Inst.

J
Junction.....Jct. or Junc.
January.....Jan.

L
Word or Phrase Symbol
Laugh.....Ha Ha
Learn.....Lrn.
Leave.....Lv.
Loads.....Lds.
Local.....Loc.
Limited.....Ltd.

M
Mistake.....Msk.
Make.....Mk.
Manager.....Mgr.
Many.....Mny.
Marked.....Mkd.
Matter.....Mtr.
Merchandise.....Mdse.
Message.....Msg.
Messenger.....Msgr.
Minute.....Min.
Much.....Mch.

N
Night.....Nite.
Necessary.....Necy.
Nothing.....Ntg.
Now.....Nw.
No More.....N. M.
No Such Number.....N. S. N.
Number.....No.

O
O'Clock.....K.
Office.....Ofs.
On Time.....O. T.
Operator.....Opr.

P
Paid.....Pd.
Passenger.....Psgr.
Please.....Pls.

Q
Quick.....Qk.

R
Railway.....Ry.
Ready.....Rdy.
Received.....Recd.
Reporting Trains.....O. S.
Repeat.....Rr.

COMMON ABBREVIATIONS—*Continued*

S	
Word or Phrase	Symbol
Say	Sa.
Second	Sec.
See	C.
Special	Spl.
Should	Shld.
Sign	Sine.
Signature	Sig.
Station	Stn.
Stay	Sta.
Safe for Breakfast	S. F. B.
Safe for Dinner	S. F. D.
Safe for Tea	S. F. T.
Street	St.
Superintendent	Supt.

T	
Take	Tk.
Telegraph	Tel.
Tariff	Tff.
Thanks	Tx.
That	Tt.
Them	Em.

T	
Word or Phrase	Symbol
Their	Tr.
They	Ty.
Think	Tnk.
Through	Tru.
Train	Trn.
Train Report	O. S.
Train will be held until Order is Complete	X.

W	
Way-Bill	W. B.
What	Wt.
When	Wn.
Where	Wr.
Why	Wy.
Who	Wo.
Will	Wi.
Would	Wld.

Y	
Yes	Es.
Yet	Et.
You	U.

TEST QUESTIONS.

1. What is absolutely necessary in receiving?
2. How is the making of a letter on the key determined?
3. What three punctuation marks are used most?
4. Why is it necessary for an operator or agent to take an interest in the Company's welfare?
5. Why is it necessary for an operator to have a personal signal?
6. Describe what the train rules are composed of.
7. What is the prime requisite in railroading?
8. When day and night operators are relieving one another, what is necessary? Give examples.
9. What is necessary before closing your office for the night?
10. Have you practiced the abbreviations?

TELEGRAPHY

Special Examination No. 3

1. (a) When will a holding order be used?
(b) To whom will it be addressed?
(c) To whom delivered?
2. "Hold all east bound trains."
When a train has been so held, under what circumstances may it proceed?
3. "Order No. ten (10) is annulled."
May an order which has been annulled be reissued under its original number?
4. (a) If an order which is to be annulled has not been delivered to a train, how will the annulling order be addressed?
(b) How will the Operator be governed?
5. "Line clear to Galt for No. 3 eng. 565."
(a) What right does this order give to the train named?
(b) Must trains running under this form of order, observe Rule 91?
(c) To whom must the order be addressed?
(d) How will the operator receiving the order be governed?
6. "Operator 'G' hold all trains following No. 64 until ten (10) a.m."
"Operator 'G' hold all trains following No. 4 eng. 545 until No. 4 eng. 545 arrives at F."
(a) To whom must this order be addressed?
(b) How will the Operator be governed?
(c) What must be ascertained by a train before leaving its initial station or junction? D-83.
7. How must work extras move on double track?
8. In double track which main track must be used?
9. When it is desired to move a train against the current of traffic over the working limits, what must be done?
10. "Eng. 292 work on east bound track seven (7) a.m. to six (6) p.m. between D and E."

Under this order how will the work extra be governed?

DOMINION SCHOOL OF TELEGRAPHY AND RAILROADING

TELEGRAPHY, SPECIAL EXAMINATION NO. 3

11. "Work extra 292 has right over all trains on east bound tracks between D & E seven (7) p.m. to twelve (12) night."

What right does this order confer on the work extra?

12. What must be done before a train is moved against the current of traffic?
13. "No. 1 Eng. 650 has right over opposing trains on No. 2 track, C to F."

(a) Under this order how will the designated train be governed?

(b) What rights are conferred?

(c) How will opposing trains be governed?

14. "After No. 4 Eng. 620 arrives at C. No. 1 eng. 570 has right over opposing trains on No. 2 track C. to F."

Under this order, when may the train be moved against the current of traffic, leave C.?

15. "No. 1 track (or west bound) track will be used as single track between F. and G. one (1) p.m. to three (3) p.m."

(a) Under this order, which track must all trains use?

(b) How will they be governed?

(c) How will trains running against the current of traffic on the track named be governed?

SUPPLIES FOR STUDENTS

We always keep on hand the necessary supplies, so that students need not go outside the school to get anything they require in connection with their studies.

A student begining his course in the Day School pays \$2.00 for his instruction books and a supply of stationery. The stationery consists of scribbling books, writing pads, speed examination pad, two pencils, pen holder, two pen points, in addition to having the regular station forms which are supplied in the stations. The message blanks, etc., are not required until such time as a student gets in the senior class.

The following articles may be purchased any time through the school:—

Telegraph Learner's Outfit, including dry cell battery and wire.....	\$3.00
Individual Telegraph Key (Leg), each.....	1.75
Individual Telegraph Key (Legless), each.....	2.25
Individual Telegraph Sounder, each.....	2.75
Bell Wire for connecting instruments, 25 feet for.....	.15
Blue Vitrol (for Gravity Battery), per lb.....	.15
Jar for Gravity Battery.....	.40
Gravity Battery, complete, with copper, zinc and Blue Vitrol, 1 lb.....	1.25
Drv Cell Battery, each	.25
Fountain Pens, Special.....	1.50
Stylusses for writing train orders, each.....	.25
Scribbling Pads, each	.05
Examination Pads (3 for 25c) each.....	.10
Pen Holders, each	.05
Pencils, 2 for.....	.05
Twentieth Century Telegraph Manual, by Frederick L. Meyer, Chicago	1.50
Penmanship Book, Part 1.....	.15
Penmanship Book, Part 2.....	.25
Mecrograph (A Hand Sending Instrument).....	9.00
Automatic Telegraph Transmitter (for home study purposes).....	25.00

